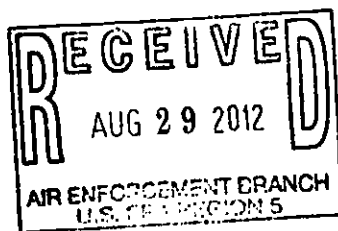




August 21, 2012

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC40)
Post Office Box 19276
Springfield, Illinois 62794-9276

AUG 28 2012



Subject: Semi-Annual Monitoring System Performance Report for Sterigenics - Willowbrook, IL Facilities – Permit ID #043110AAC/Summary Report-Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance

Dear Compliance Section:

This letter constitutes the semi-annual monitoring and summary report for Sterigenics Willowbrook, Illinois facilities. This report is intended to satisfy all semi-annual reporting requirements in our current air permit. This report is organized by reporting requirements required by 40 CFR 63.366 (a)(3) and permit condition.

Summary Report for Sterigenics' facilities located at 7775 Quincy Street, Willowbrook, IL and 830 Midway Drive, Willowbrook, IL. These two facilities are combined in Permit #043110AAC.

Reporting Period Dates:

January 1, 2012 to June 30, 2012.

Description of Process Units:

The facility process units are sterilization process chambers of various size using ethylene oxide and propylene oxide gases as the sterilant. The sterilization process chambers vacuum pump emissions are vented to the DeOxx Scrubber for Willowbrook I and to the AAT Scrubber for Willowbrook II. The aeration rooms are vented to the AAT Scrubber for Willowbrook I and II. Back vents are uncontrolled.

Emission and Operating Parameter Limitations Specified in Relevant Standards:

<u>Control Device:</u>	<u>Control Parameter</u>	<u>Limitations/Standards</u>	<u>Deviations</u>
<u>DeOxx Scrubber WB I</u>	<u>Scrubber Glycol Solution Liquor Level</u>	<u>Record Weekly, must be less than 5,200 gallons.</u>	<u>None</u>
<u>AAT Scrubber WB I</u>	<u>Scrubber Glycol Solution Liquor Level</u>	<u>Record Weekly, must be less than or equal to 160"</u>	<u>None</u>
<u>AAT Dry Bed Analysis WB I</u>	<u>Dry Bed Emission Outlet Concentration</u>	<u>Record Weekly, must be less than 1 ppm</u>	<u>None</u>
<u>AAT Scrubber WB II</u>	<u>Scrubber Glycol Solution Liquor Level</u>	<u>Record Weekly, must be less than 202"</u>	<u>None</u>
<u>AAT Dry Bed Analysis WB II</u>	<u>Dry Bed Emission Outlet Concentration</u>	<u>Record Weekly, must be less than 1 ppm for Aeration and 60 ppm for Vacuum Pump Discharge</u>	<u>None</u>

Sterigenics International LLC
2015 Spring Road, Suite 650 • Oak Brook, IL 60523
Tel 630.928.1700 • Fax 630.928.1701 • www.sterigenics.com

1. 2000 (10) 2000
2. 2000 (10) 2000
3. 2000 (10) 2000
4. 2000 (10) 2000
5. 2000 (10) 2000
6. 2000 (10) 2000
7. 2000 (10) 2000
8. 2000 (10) 2000
9. 2000 (10) 2000
10. 2000 (10) 2000

Monitoring Equipment Manufacturers and Model Numbers:

N/A. There is no CMS monitoring equipment.

The date of the latest CMS certification or audit:

N/A. There is no CMS monitoring equipment.

The Total Operating Time of the Affected Source During the Reporting Period:

4,344 Hours.

The AAT Scrubber Willowbrook II was down for 72 hours for replacement of a pump; replacement was conducted with like-for-like equipment. During that period there were no excess emissions.

Operation was continuous throughout the reporting period for the DOxx Scrubber Willowbrook I and the AAT Scrubber Willowbrook I.

Emission Data Summary:

Control Unit	Total Duration of Excess Emissions/quantity released	Excess Emission Duration by Cause (hours)				
		Startup/Shutdown	Control Equipment Problems	Process Problems	Other Known Causes	Unknown Causes
DeOxx Scrubber WB I	None	N/A	N/A	N/A	N/A	N/A
AAT Scrubber WB I	None	N/A	N/A	N/A	N/A	N/A
AAT Scrubber II	None	N/A	N/A	N/A	N/A	N/A

CMS Performance Summary:

N/A

Description of Changes in CMS, Process or Controls since Last Reporting Period:

N/A

Condition 8.6.1 requires:

A report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows, unless more frequent submittal of such reports is required in Sections 5 or 7 of this permit:

Monitoring Period

January – June

July – December

Report Due Date

September 1

March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with condition 9.9.

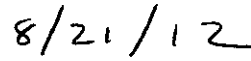
Sterigenics U.S. LLC has reviewed all applicable provisions of the operating permit. All liquid levels in the scrubbers are being monitored weekly and were within the levels established during the compliance test. U.S. EPA Region 5 approved monitoring requirements for the AAT Dry Bed Adsorbent System on December 19, 2002. There have not been any deviations from current applicable limits or standards. There also have not been any monitor malfunctions during the reporting period from January 1, 2012 through June 30, 2012.

Responsible Official Certification

Based on the information and belief formed after reasonable inquiry, the statements and information in this report are true, accurate, and complete.



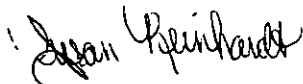
Kathy Hoffman
Senior Vice President - EHS



Date

If you have any questions regarding this report, please call me at (630) 928-1768.

Sincerely,



Susan Reinhardt
Manager
Environment, Health and Safety

Pc: Bob Novak – Manager of Operations - Willowbrook
Kathleen Hoffman – Senior Vice-President EHS
Sandra Haissig- Vice President of Operations

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

USEPA (AR-17J)
Air & Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604

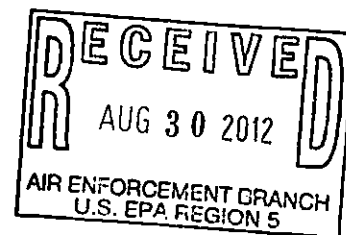
UOP LLC

25 E. Algonquin Rd.
Des Plaines, IL 60017-5017

Tel: 847.391.2000

Fax: 847.391.2253

Certified Mail Return Receipt Requested



August 27, 2012

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P. O. Box 19276
Springfield, IL 62794-9276

Subject: CAAPP Semi-Annual Monitoring Report 2012
UOP LLC - Des Plaines, IL
ID#: 031063ABE
Permit # 95120029

Dear Sir/Madam:

Enclosed is a completed IEPA CAAPP Semi-Annual Monitoring Report for January thru June 2012. The report includes the certification sheet and Vapor pressure tests of the waste liquid for our waste hydrocarbon underground storage tank for this time period (Section 3.2.5 of the Title V Permit).

For further information, please contact Robert Wachsmuth (847) 391-3402.

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew S. Zarchy".

Andrew S. Zarchy
Director, Experimental Development
Research and Development

Cc: Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

USEPA (AE- 17J)
Air and Radiation Division
77 West Jackson Boulevard
Chicago, Illinois 60604



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL – PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE

Revision #: _____
Date: ____ / ____ / ____
Page ____ of ____
Source Designation: _____

COMPLIANCE AND GENERAL REPORTING FORM	FOR AGENCY USE ONLY
	ID NUMBER: _____
	PERMIT #: _____
	DATE: _____

THIS FORM IS USED FOR EITHER OF THE FOLLOWING:

- TO REPORT AND CERTIFY COMPLIANCE OF AN ENTIRE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS DURING A REPORTING PERIOD, OR
- TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT. THIS FORM SHOULD BE USED AS THE COVER SHEET OF THE SUBMITTED REPORT.

SOURCE INFORMATION	
1) SOURCE NAME: UOP LLC	
2) DATE FORM PREPARED: 8/24/2012	3) SOURCE ID NO. (IF KNOWN): 031063ABE

GENERAL INFORMATION
4) INDICATE FOR WHICH OF THE FOLLOWING THIS FORM IS BEING COMPLETED: <input type="checkbox"/> TO REPORT AND CERTIFY COMPLIANCE OF THE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS <input checked="" type="checkbox"/> TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT
5) PERIOD COVERED BY THIS REPORT: FROM: January 1, 2012 TO: June 30, 2012
6) NAME AND PHONE NUMBER OF PERSON TO CONTACT FOR QUESTIONS REGARDING THIS REPORT: NAME: Robert Wachsmuth TITLE: Environmental Coordinator PHONE#: (847) 391 - 3,402 EXT: _____

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE 1

Printed on Recycled Paper
400-CAAPP

FOR APPLICANT'S USE

COMPLIANCE OF SOURCE OR EQUIPMENT DURING REPORTING PERIOD

- COMPLETE ITEM 7 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF THE ENTIRE SOURCE.
- COMPLETE ITEM 8 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF SPECIFIC ITEMS OF EQUIPMENT ONLY.

7) WAS THE SOURCE IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD? ☒ YES ☐ NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 -"EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

8a) LIST THE EMISSION UNIT(S) AND CONTROL EQUIPMENT FOR WHICH THIS FORM IS BEING COMPLETED TO REPORT AND CERTIFY COMPLIANCE WITH (IF ADDITIONAL SPACE IS NEEDED FOR ITEM 10, ATTACH AND LABEL AS EXHIBIT 400-A):

Insignificant Activities Section 3.0

Compliance with Applicable Requirements 3.2

b) IDENTIFY THE APPLICABLE REQUIREMENT(S) FOR WHICH THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE WITH:

Section 3.2.54 For the waste hydrocarbon underground storage tank which requires a physical test of the vapor pressure of the waste liquid stored in the storage tank at least once every six months after the initial physical test.

c) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRE THAT THIS REPORT OR CERTIFICATION BE SUBMITTED:

8.6 Reporting Requirements

8.6.1 Monitoring Reports

Monitoring report needs to be submitted every six months

Monitoring period - January 1, 2012 thru June 30, 2012

d) WERE THE ABOVE REFERENCED ITEMS IN 8(a) IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD?



YES



NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

REPORT INFORMATION

9) TITLE OF REPORT BEING SUBMITTED:

10) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRES THIS REPORT (IF APPLICABLE):

11) BRIEFLY EXPLAIN WHAT THIS REPORT COVERS:

12) ATTACH THE REPORT TO THIS FORM.

Attached

SIGNATURE BLOCK

NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE RETURNED AS INCOMPLETE.

13) I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

AUTHORIZED SIGNATURE:

BY:



AUTHORIZED SIGNATURE

Andrew S. Zarchy

TYPED OR PRINTED NAME OF SIGNATORY

Director, Experimental Development, R&D

TITLE OF SIGNATORY

AUG / 24 / 2012

DATE

5-11-2012 WASTE

untitled

VPXpert Curve Result

serial no.: 90
 Sample Name: s
 User Name:
 Date/Time: 15/05/2012 11:05
 meas. method: ASTM D5191 prep.
 T_start: 10.0
 T_final: 40.0
 Stepwidth: 1
 HeatRate: 1.0
 V/L ratio: 4.0

DVPE = 0.88[psi] p_tot = 1.47[psi] p_gas = 0.20[psi]

Formula: $0.965 \cdot p_{tot} + 0.000 \cdot p_{gas} - 0.548$ [psi]

meas no.	Tmeas	DVPE	p_gas
meas no.001:	Tmeas: 10.0	=> DVPE = 0.88[psi]	p_gas = 0.20[psi]
meas no.002:	Tmeas: 11.0	=> DVPE = 0.97[psi]	p_gas = 0.20[psi]
meas no.003:	Tmeas: 12.0	=> DVPE = 1.05[psi]	p_gas = 0.20[psi]
meas no.004:	Tmeas: 13.0	=> DVPE = 1.16[psi]	p_gas = 0.20[psi]
meas no.005:	Tmeas: 14.0	=> DVPE = 1.24[psi]	p_gas = 0.20[psi]
meas no.006:	Tmeas: 15.0	=> DVPE = 1.33[psi]	p_gas = 0.20[psi]
meas no.007:	Tmeas: 16.0	=> DVPE = 1.43[psi]	p_gas = 0.20[psi]
meas no.008:	Tmeas: 17.0	=> DVPE = 1.52[psi]	p_gas = 0.20[psi]
meas no.009:	Tmeas: 18.0	=> DVPE = 1.62[psi]	p_gas = 0.20[psi]
meas no.010:	Tmeas: 19.0	=> DVPE = 1.72[psi]	p_gas = 0.20[psi]
meas no.011:	Tmeas: 20.0	=> DVPE = 1.82[psi]	p_gas = 0.20[psi]
meas no.012:	Tmeas: 21.0	=> DVPE = 1.94[psi]	p_gas = 0.20[psi]
meas no.013:	Tmeas: 22.0	=> DVPE = 2.05[psi]	p_gas = 0.20[psi]
meas no.014:	Tmeas: 23.0	=> DVPE = 2.16[psi]	p_gas = 0.20[psi]
meas no.015:	Tmeas: 24.0	=> DVPE = 2.27[psi]	p_gas = 0.20[psi]
meas no.016:	Tmeas: 25.0	=> DVPE = 2.40[psi]	p_gas = 0.20[psi]
meas no.017:	Tmeas: 26.0	=> DVPE = 2.53[psi]	p_gas = 0.20[psi]
meas no.018:	Tmeas: 27.0	=> DVPE = 2.65[psi]	p_gas = 0.20[psi]
meas no.019:	Tmeas: 28.0	=> DVPE = 2.79[psi]	p_gas = 0.20[psi]
meas no.020:	Tmeas: 29.0	=> DVPE = 2.92[psi]	p_gas = 0.20[psi]
meas no.021:	Tmeas: 30.0	=> DVPE = 3.07[psi]	p_gas = 0.20[psi]
meas no.022:	Tmeas: 31.0	=> DVPE = 3.23[psi]	p_gas = 0.20[psi]
meas no.023:	Tmeas: 32.0	=> DVPE = 3.37[psi]	p_gas = 0.20[psi]
meas no.024:	Tmeas: 33.0	=> DVPE = 3.53[psi]	p_gas = 0.20[psi]
meas no.025:	Tmeas: 34.0	=> DVPE = 3.69[psi]	p_gas = 0.20[psi]
meas no.026:	Tmeas: 35.0	=> DVPE = 3.85[psi]	p_gas = 0.20[psi]
meas no.027:	Tmeas: 36.0	=> DVPE = 4.03[psi]	p_gas = 0.20[psi]
meas no.028:	Tmeas: 37.0	=> DVPE = 4.19[psi]	p_gas = 0.20[psi]
meas no.029:	Tmeas: 38.0	=> DVPE = 4.37[psi]	p_gas = 0.20[psi]
meas no.030:	Tmeas: 39.0	=> DVPE = 4.55[psi]	p_gas = 0.20[psi]
meas no.031:	Tmeas: 40.0	=> DVPE = 4.77[psi]	p_gas = 0.20[psi]

$$1.82 \text{ psi} \left(\frac{6.89 \text{ Kpa}}{\text{psi}} \right) = 12.54 \text{ Kpa}$$

2/15/12

HWUST -

FLASH = < -3.0

Untitled

DVPE @ 20°C = 2.46 PSI

VPXpert Curve Result

serial no.: 90

Sample Name: s

User Name:

Date/Time: 15/02/2012 16:11

meas. method: ASTM D5191 prep.

T_start: 10.0

T_final: 40.0

Stepwidth: 1

HeatRate: 1.0

V/L ratio: 4.0

DVPE = 1.33[psi] p_tot = 1.95[psi] p_gas = 0.49[psi]

Formula: $0.965 \cdot p_{\text{tot}} + 0.000 \cdot p_{\text{gas}} - 0.548$ [psi]

meas no.001:	Tmeas: 10.0	=>	DVPE = 1.33[psi]	p_gas = 0.49[psi]
meas no.002:	Tmeas: 11.0	=>	DVPE = 1.46[psi]	p_gas = 0.49[psi]
meas no.003:	Tmeas: 12.0	=>	DVPE = 1.58[psi]	p_gas = 0.49[psi]
meas no.004:	Tmeas: 13.0	=>	DVPE = 1.68[psi]	p_gas = 0.49[psi]
meas no.005:	Tmeas: 14.0	=>	DVPE = 1.76[psi]	p_gas = 0.49[psi]
meas no.006:	Tmeas: 15.0	=>	DVPE = 1.88[psi]	p_gas = 0.49[psi]
meas no.007:	Tmeas: 16.0	=>	DVPE = 2.00[psi]	p_gas = 0.49[psi]
meas no.008:	Tmeas: 17.0	=>	DVPE = 2.11[psi]	p_gas = 0.49[psi]
meas no.009:	Tmeas: 18.0	=>	DVPE = 2.21[psi]	p_gas = 0.49[psi]
meas no.010:	Tmeas: 19.0	=>	DVPE = 2.34[psi]	p_gas = 0.49[psi]
meas no.011:	Tmeas: 20.0	=>	DVPE = 2.46[psi]	p_gas = 0.49[psi]
meas no.012:	Tmeas: 21.0	=>	DVPE = 2.58[psi]	p_gas = 0.49[psi]
meas no.013:	Tmeas: 22.0	=>	DVPE = 2.71[psi]	p_gas = 0.49[psi]
meas no.014:	Tmeas: 23.0	=>	DVPE = 2.84[psi]	p_gas = 0.49[psi]
meas no.015:	Tmeas: 24.0	=>	DVPE = 2.97[psi]	p_gas = 0.49[psi]
meas no.016:	Tmeas: 25.0	=>	DVPE = 3.10[psi]	p_gas = 0.49[psi]
meas no.017:	Tmeas: 26.0	=>	DVPE = 3.24[psi]	p_gas = 0.49[psi]
meas no.018:	Tmeas: 27.0	=>	DVPE = 3.39[psi]	p_gas = 0.49[psi]
meas no.019:	Tmeas: 28.0	=>	DVPE = 3.53[psi]	p_gas = 0.49[psi]
meas no.020:	Tmeas: 29.0	=>	DVPE = 3.69[psi]	p_gas = 0.49[psi]
meas no.021:	Tmeas: 30.0	=>	DVPE = 3.85[psi]	p_gas = 0.49[psi]
meas no.022:	Tmeas: 31.0	=>	DVPE = 4.03[psi]	p_gas = 0.49[psi]
meas no.023:	Tmeas: 32.0	=>	DVPE = 4.19[psi]	p_gas = 0.49[psi]
meas no.024:	Tmeas: 33.0	=>	DVPE = 4.39[psi]	p_gas = 0.49[psi]
meas no.025:	Tmeas: 34.0	=>	DVPE = 4.55[psi]	p_gas = 0.49[psi]
meas no.026:	Tmeas: 35.0	=>	DVPE = 4.75[psi]	p_gas = 0.49[psi]
meas no.027:	Tmeas: 36.0	=>	DVPE = 4.94[psi]	p_gas = 0.49[psi]
meas no.028:	Tmeas: 37.0	=>	DVPE = 5.14[psi]	p_gas = 0.49[psi]
meas no.029:	Tmeas: 38.0	=>	DVPE = 5.35[psi]	p_gas = 0.49[psi]
meas no.030:	Tmeas: 39.0	=>	DVPE = 5.55[psi]	p_gas = 0.49[psi]
meas no.031:	Tmeas: 40.0	=>	DVPE = 5.78[psi]	p_gas = 0.49[psi]

$$2.46 \text{ PSI} \left(\frac{6.89 \text{ KPa}}{\text{PSI}} \right) = 16.95 \text{ KPa}$$